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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,300	07/28/2003	Joseph G. Vazach	03AB043	3489

7590 05/05/2006

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EXAMINER
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LEJA, RONALD W

ART UNIT	PAPER NUMBER
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2836

DATE MAILED: 05/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/628,300

Applicant(s)

VAZACH ET AL.

Examiner

Ronald W. Leja

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/16/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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Claims 3, 4, 6-8, 10, 13 and 14 are objected to because of the following informalities: There is a lack of antecedent basis for current limiting element in Claim 3, for zener diode in Claims 6 and 8 and for DC blocking element in Claim 10. Claims 13 and 14 should more properly refer to terminal sets for consistency purposes. In Claim 7, line 2, voltages should be voltage. Claim 4 is bothersome as it is not known for sure whether "a predetermined value no greater than 7.5 volts" is NEW MATTER or not. Clarification on this issue is requested or the limitation removed if there is no support. Appropriate correction is required.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hallenbeck (3,614,539) in view of Morgan (3,624,449), Kogure (5,835,534) and Flasz et al. (6,980,174).

Hallenbeck discloses (see Figs 1, 3, and 5) an in-line isolation barrier having a housing with opposing terminals and indicia (for Claims 1, 13, 14). The barrier includes a fusible link (F), voltage sensitive conductor (Z1, Z2) and current limiting resistor (R1) (for Claims 2, 3), but does not appear to show high-speed abilities, clear impedance matching and bi-polar voltage sensitive. Hallenbeck discusses the need for addressing impedance of the barrier with respect to the safe and hazardous areas so as to prevent a problem in the worst case scenario (see Col. 6, lines 10-20 and Col. 7, lines 38-65). Therefore it would have been obvious to adjust/match the impedance for the most protection and/or communication abilities, depending upon the specific application-at-hand, thereby leading to a more reliable end-product. In addition, Kogure teaches a safety barrier wherein matching circuits (64, 7) so as to compensate for the frequency band of the connected field equipment. As far as high speed, this again would have been obvious as a matter of meeting the particular application-at-hand. Flasz et al. teach the use of an intrinsic safety barrier wherein application involves high frequency data transmissions, thus requiring coaxial and BNC connectors (for Claims 1, 12). Therefore, it would have been obvious to apply the Hallenbeck barrier to those applications involving high frequency and high speed data transmissions, utilizing the appropriate connectors, i.e. BNC of Flasz et al., and matching circuitry of Kogure, and thus, gain in increased design applications and sales. Addressing the bi-polar aspect of the voltage sensitive conductor of Claim 1, as well as Claims 4-8 and 15, Hallenbeck is concerned with a single line referenced to ground, and thus, single direction zener use (two are required for the case if one should fail). However, Morgan show that for two wire communications, bipolar voltage sensitive conductors are required (Z1, Z2, Z11, Z12). Therefore, it is the opinion of the


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Examiner that it would have been obvious to use as many zener diodes and connected in any direction deemed necessary so as to ensure that the anticipated worst-case scenario for the particular application-at-hand would be covered for excess voltages, thereby, helping to ensure safety for equipment and personnel and prevent losses.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald W. Leja whose telephone number is (571)272-2053. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571)272-2800. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Ronald W. Leja  
Primary Examiner  
Art Unit 2836



rwl  
May 1, 2006